This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of claims:**

1. (Currently Amended): A process for producing a compound of formula I:

#### wherein

 $\underline{R_1 \text{ is } C_{1\text{-}12} \text{ alkyl, } C_{2\text{-}12} \text{ alkenyl, } C_{2\text{-}12} \text{ alkynyl, } C_{6\text{-}12} \text{ aryl, } C_{3\text{-}10} \text{ heterocycle, } C_{6\text{-}12} \text{ aralkyl or } \\ \underline{C_{3\text{-}10} \text{ heteroaralkyl, and}}$ 

 $R_2$  is a hydroxyl protecting group; said process comprising the steps of:

a) subjecting a compound compounds of formula II:

to an enzymatic diastereomeric resolution in the presence of a suitable amount of enzyme chosen from Pig Liver Esterase enzyme or Porcine Pancreatic Lipase enzyme;

b) recovering said compound of formula I wherein;

 $R_{1}\ is\ chosen\ from\ C_{1-12}\ alkyl,\ C_{2-12}\ alkenyl,\ C_{2-12}\ alkynyl,\ C_{6-12}\ aryl,\ C_{3-10}\ heterocycle,\ C_{6-12}$   $aralkyl\ or\ C_{3-10}\ heteroaralkyl;\ and$ 

R<sub>2</sub> is a hydroxyl protecting group.

- 2. (Original): The process according to claim 1, wherein  $R_1$  is  $C_{1-12}$  alkyl.
- 3. (Currently Amended): The process according to claim 1 wherein  $R_2$  is ehosen from: CO-C<sub>1-6</sub> alkyl, CO-C<sub>6-12</sub> aryl, CO-C<sub>1-6</sub> alkoxy, CO-C<sub>6-12</sub> aryloxy, or CO-C<sub>6-12</sub> arylalkyl.
- 4. (Currently Amended): The process according to claim 1, wherein  $R_2$  is CO-C<sub>6-12</sub> aryl.
- 5. (Currently Amended): The process according to claim 1, wherein the enzyme is Pig Liver Esterase.
- 6. (Currently Amended): The process according to claim 1, wherein the enzyme is Porcine Pancreatic Lipase.
- 7. (Currently Amended): The process according to claim 1, further comprising the steps of:
- a) replacing the functional group at position C4 of the compound of formula I to produce a compound of formula V:

wherein B is purine or pyrimidine base or an analogue thereof;

- b) removing the group  $R_2$  of said compound of formula V;
- c) recovering a compound of formula VI:

or a pharmaceutically acceptable salt thereof;

### wherein;

B is purine or pyrimidine base or an analogue thereof.

8. (Currently Amended): The process according to claim 7, wherein

B is chosen from:

### wherein;

 $R_3$  is chosen from H,  $C_{1-6}$  alkyl,  $C_{1-6}$  acyl, or and CO- $R_9$ ; wherein

 $R_9$  is H or  $C_{1-6}$  alkyl;

 $R_4$  and  $R_5$  are each independently <del>chosen from</del> H,  $C_{1-6}$  alkyl, bromide, chloride, fluoride, iodide or  $CF_3$ ; and

 $R_6$ ,  $R_7$  and  $R_8$  are each independently <del>chosen from</del> H, bromide, chloride, fluoride, iodide, amino, hydroxyl, or  $C_{3-6}$  cycloalkylamino.

9. (Currently Amended): The process according to claim 1, further comprising the step of recovering a compound of formula VII:

- 10. (Original): A process according to claim 1, wherein  $R_1$  is  $C_{1-12}$  alkyl and  $R_2$  is  $CO-C_{6-12}$  aryl.
- 11. (Original): A process according to claim 1, wherein  $R_1$  is methyl and  $R_2$  is benzoyl.
  - 12. (Currently Amended): A process for producing a compound of formula III:

### wherein wherein

 $R_{11}$  is  $C_{1-12}$  alkyl,  $C_{2-12}$  alkenyl,  $C_{2-12}$  alkynyl,  $C_{6-12}$  aryl,  $C_{3-10}$  heterocycle,  $C_{6-12}$  aralkyl or  $C_{3-10}$  heteroaralkyl; and  $R_{12}$  is a hydroxyl protecting group,

said process comprising the steps of:

a) subjecting a compound compounds of formula IV:

to an enzymatic diastereomeric resolution in the presence of a suitable amount of enzyme, wherein said enzyme is ehosen from Candida Antarctica "A" lipase, Candida Antarctica "B" lipase, Candida Lypolitica Lipase, or Rhizomucor Miehei Lipase; and

b) recovering said compound of formula III $\frac{1}{2}$ 

wherein; R<sub>11</sub> is chosen from C.sub.1 12 alkyl, C.sub.2 12 alkenyl, C.sub.2 12 alkynyl,

C.sub.6 12 aryl, C.sub.3 10 heterocycle, C.sub.6 12 aralkyl or C.sub.3 10 heteroaralkyl; and R<sub>12</sub> is a hydroxyl protecting group.

- 13. (Original): The process according to claim 12, wherein  $R_{11}$  is  $C_{1-12}$  alkyl.
- 14. (Currently Amended): The process according to claim 12, wherein  $R_{12}$  is ehosen from:  $CO-C_{1-6}$  alkyl,  $CO-C_{6-12}$  aryl,  $CO-C_{1-6}$  alkoxy,  $CO-C_{6-12}$  aryloxy, or  $CO-C_{6-12}$  arylalkyl.
  - 15. (Original): The process according to claim 12, wherein  $R_{12}$  is CO- $C_{6-12}$  aryl.
- 16. (Original): The process according to claim 12, wherein the enzyme is Candida Antarctica "A" lipase.
- 17. (Original): The process according to claim 12, wherein the enzyme is Candida Antarctica "B" lipase.
- 18. (Original): The process according to claim 12, wherein the enzyme is Candida Lypolitica Lipase.
- 19. (Original): The process according to claim 12, wherein the enzyme is Rhizomucor Miehei Lipase.
- 20. (Currently Amended): The process according to claim 12, further comprising the steps of:
- a) replacing the functional group at position C4 of the compound of formula III to produce a compound of formula VIII:

# wherein B is purine or pyrimidine base or an analogue thereof;

- b) removing the group R<sub>12</sub> of said compound of formula VIII;
- c) recovering a compound of formula IX:

or a pharmaceutically acceptable salt thereof; wherein; B is purine or pyrimidine base or an analogue thereof.

21. (Currently Amended): The process according to claim 20, wherein B is chosen from:

### wherein;

R<sub>3</sub> is <del>chosen from</del> H, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> acyl and CO-R<sub>9</sub>; <del>wherein</del>

R<sub>9</sub> is H or C<sub>1-6</sub> alkyl;

 $R_4$  and  $R_5$  are each independently <del>chosen from</del> H,  $C_{1-6}$  alkyl, bromide, chloride, fluoride, iodide or  $CF_3$ ; and

 $R_6$ ,  $R_7$  and  $R_8$  are each independently ehosen from H, bromide, chloride, fluoride, iodide, amino,

hydroxyl or  $C_{3-6}$  cycloalkylamino.

22. (Currently Amended): The process according to claim <u>1226</u>, further comprising the step of converting said compound of formula III to a compound of formula IV and recovering <u>asaid</u> compound of formula X:

- 23. (Original): A process according to claim 12, wherein  $R_{11}$  is  $C_{1-12}$  alkyl and  $R_{12}$  is  $CO-C_{6-12}$  aryl.
- 24. (Original): A process according to claim 12, wherein  $R_{11}$  is methyl and  $R_{12}$  is benzoyl.